Executive Summary

ES 1 Introduction

This Resource Management Plan (RMP) and Environmental Impact Statement (EIS) describes and analyzes alternatives for the future management of public lands and resources the Bureau of Land Management (BLM) administers in the south central Montana and in northern Wyoming. The Billings and Pompeys Pillar National Monument Draft RMP/EIS would revise the 1984 RMP, as amended, for the BLM Billings Field Office (BiFO) and Pompeys Pillar National Monument in a consolidated RMP. This plan revision is a combined effort that addresses both the Billings Field Office and the Pompeys Pillar National monument in one consolidated RMP and associated EIS. This document refers to the combined Billings and PPNM planning areas as the Planning Area and is referenced throughout the document as the Billings and Pompeys Pillar National Monument DRMP/EIS. The Planning Area covers approximately 10,804,549 acres of federal, state, and private lands in eight Montana counties (Big Horn, Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, and Yellowstone) and portions of Big Horn County, Wyoming consisting of 4,298 acres of the Pryor Mountain Wild Horse Range. Included within the Planning Area is Pompeys Pillar National Monument (51 acres) which was established in 2001 by executive proclamation of the President. Because these are combined planning efforts, upon issuance of the Billings and Pompeys Pillar National Monument Proposed RMP and Final EIS, and subsequent reviews and resolution of protests, if any, two separate Records of Decision will be issued for each area.

Of the total area, 434,154 acres are BLM-administered surface lands and 1,839,782 acres are federal mineral estate.

Revising existing land use plans is a major federal action for the BLM. The National Environmental Policy Act of 1969 (NEPA), as amended, requires federal agencies to prepare an EIS for major federal actions; thus this Draft RMP and EIS is a combined document. The Draft EIS analyzes the impacts of four alternative RMPs for the Planning Area, including the No Action Alternative (Alternative A) and the Agency Preferred Alternative (Alternative D), The No Action Alternative reflects current management (the existing plan). The analysis considers a comprehensive range of alternatives that provide for various levels of resource protection and opportunities for motorized and non-motorized recreational activities, leasing and development of mineral resources, livestock grazing, and other land use activities.

ES 1.1 Purpose and Need

The BLM administers public lands in the Planning Area according to one plan: the Billings RMP (1984), as amended. Since the Record of Decision for the existing plan, new data have become available, and laws, regulations, and policies regarding management of these public lands have changed. In addition, decisions in the existing plan do not satisfactorily address all new and emerging issues in the Planning Area. These changes and potential deficiencies

created the need to revise the existing plan. The new RMP will address the changing needs of the Planning Area and select a management strategy that best achieves a combination of the following:

- Employing a community-based planning approach to seek broadly supported solutions to issues, and collaborate with federal, state, and local cooperating agencies.
- Establishing goals and objectives for managing resources and resource uses on the approximately 434,154 BLM-administered surface acres and 1,839,782 acres of BLM-administered federal mineral estate in the Planning Area both administered by the BLM Billings Field Office in accordance with the principles of multiple use and sustained yield.
- Identifying land use plan decisions to guide future land management actions and subsequent site-specific implementation decisions.
- Identifying management actions and allowable uses anticipated to achieve the established goals and objectives and reach desired outcomes.
- Providing comprehensive management direction by making land use decisions for all appropriate resources and resource uses the BLM administers in the Planning Area.
- Providing for compliance with applicable tribal, federal, and state laws, standards, and implementation plans, and BLM policies and regulations.
- Recognizing the Nation's need for domestic sources of minerals and timber, and incorporating requirements of the Energy Policy Act of 2005 (Public Law 2005).
- Retaining flexibility to adapt to new and emerging issues and opportunities and to provide for adjustments to decisions over time based on new information and monitoring.
- Striving to be compatible with the plans and policies of adjacent local, state, tribal, and federal agencies and consistent with federal laws, regulations, and BLM policies; and be flexible enough to adapt to future BLM policy and guidance updates.

ES 1.2 Planning Issue Statements

Planning issues identified through the scoping process and other public outreach efforts focus on the demands, concerns, conflicts, or problems concerning use or management of public lands and resources in the Planning Area. The main issues described and analyzed in the EIS include the following:

- **Vegetation Communities –** How can the public lands be managed to provide desired plant communities?
- **Wildlife and Fisheries Habitat and Invasive Species –** How can public lands be managed to maintain or improve wildlife and fisheries habitats and control invasive species?
- **Threatened and Endangered Species and Special Status Species –** How can public lands be managed to conserve and recover threatened, endangered, proposed, and sensitive species?
- **Commercial Activities –** What public lands will be available for commercial activities and how will those activities be managed while protecting the integrity of other resources?
- **Recreation Activities –** How should recreation activities be managed to satisfy public demand while protecting natural and cultural resource values and provide for visitor safety?
- **Motorized and Non-Motorized Uses –** How will conflicts between motorized and non-motorized uses be resolved and how will effects to resources from motorized uses be addressed?
- **Special Designations –** What areas should be designated for special management (e.g. ACECs, Wild and Scenic Rivers, etc.) and how should these areas be managed?
- **Social and Economic Conditions –** What will be the social and economic consequences of each of the various resource management alternatives?
- **Pompeys Pillar National Monument –**
    - How will the cultural and historic values at Pompeys Pillar National Monument be protected?
    - How will recreation and visitor services at Pompeys Pillar National Monument be managed?

Planning criteria are the standards, rules, and guidelines that help direct the RMP planning process. In conjunction with planning issues, planning criteria ensure that the planning process is focused and incorporates appropriate analyses. The criteria also help guide final RMP selection, and the BLM uses the criteria as a basis for evaluating the responsiveness of planning options. Planning criteria for the Billings and Pompeys Pillar National Monument RMP are summarized below; the full planning criteria can be viewed on the Billings and Pompeys Pillar National Monument RMP website (http://www.blm.gov/mt/st/en/fo/billings_field_office/rmp.html) in the Scoping Report.

The planning criteria are as follows:

- Address all BLM-administered lands in the Planning Area.
- Consider current scientific information, research, new technologies, and the results of resource assessments, monitoring, and coordination.
- Recognize valid existing rights.
- Apply the Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for Public Lands Administered by the Bureau of Land Management in the State of Montana to all activities and provide for public safety and welfare relative to fire, hazardous materials, and abandoned mine lands (AMLs).
- Comply with NEPA, the Federal Land Policy and Management Act, and all applicable laws, regulations, policies, and guidance.
- Consider current and potential future uses of the public lands through the development reasonable foreseeable future development and activity scenarios based on historical, existing, and projected levels of use.
- Coordinate with tribes to identify sites, areas, and objects important to their cultural and religious heritages.
- Consider a reasonable range of alternatives that reflects the principles of multiple use and sustained yield.

ES 1.3 Public Involvement

A Notice of Intent (NOI) published in the Federal Register on May 15, 2008, formally announced the BLM's intent to revise the existing plans and prepare the associated EIS. Publication of the NOI initiated the scoping process and invited affected and interested agencies, organizations, and the general public to participate in determining the scope and issues to be addressed by alternatives and analyses in the EIS. The BLM held seven public scoping meetings between August 11 and August 21, 2008, in the following communities: Big Timber, Billings, Bridger, Red Lodge, Roundup, and Pompeys Pillar National Monument in Montana and Lovell, Wyoming. The seven scoping meetings provided the public with an opportunity to learn and ask questions about the project and the planning process and to submit their issues and concerns to the BLM. In addition to members of the BLM Interdisciplinary Team, about 90 people total attended the scoping meetings. The BLM collected comments from the public during the scoping meetings and throughout the scoping period.

The BLM published the Notice of Availability (NOA) for the Billings and Pompeys Pillar National Monument Draft RMP/EIS for public review and comment in the Federal Register on (insert date here). The NOA initiated the 10-day public comment period for this document. During this comment period, the BLM will hold seven public meetings on this Draft RMP and

EIS in Big Timber, Billings, Bridger, Red Lodge, Roundup, and Pompeys Pillar National Monument in Montana and Lovell, Wyoming.

ES 1.4 Cooperating Agencies and Tribal Consultation

The BLM invited local, state, federal, and tribal representatives to participate as cooperating agencies on the Billings and Pompeys Pillar National Monument RMP/EIS. The BLM invited these entities to participate because they have jurisdiction by law or because they could offer special expertise. Forty-three agencies and tribes were invited to participate as cooperating agencies and fifteen accepted the invitation to participate. The following fifteen agencies, counties and tribal representatives participated in the development of the Draft RMP/EIS as cooperating agencies: the Northern Cheyenne Tribe, the Bureau of Indian Affairs, the Bureau of Reclamation, Montana Fish, Wildlife, and Parks, the Montana State Historic Preservation Office, the Department of Natural Resources and Conservation (Northeastern Land Office and Southern Land Office), Montana Association of Counties, and the following Montana counties: Carbon County, Golden Valley County, Musselshell County, Wheatland County, Musselshell Planning Project, Yellowstone County, and Big Horn County (Wyoming).

The BLM and cooperating agencies participated in multiple workshops to formulate alternatives and meetings to keep cooperating agencies informed and to solicit their input. Development of this Draft RMP and EIS considered comments from cooperating agencies on previous administrative drafts.

Government-to-government consultation with the tribes will continue throughout the RMP process.

The Eastern Montana Resource Advisory Council also participated in the Billings and Pompeys Pillar National Monument Resource Management Plan planning process.

ES 1.5 Alternatives Considered in Detail

To comply with NEPA requirements in the development of alternatives for this RMP and EIS, the BLM sought public input and analyzed a reasonable range of alternatives, including the No Action Alternative (A). Two alternatives (Alternatives B and C) were formulated that reflect a range of resource use and conservation. Following analysis of alternatives A, B, and C, the Interdisciplinary Team provided recommendations for selecting the Agency Preferred Alternative - Alternative D. The Agency Preferred Alternative does not represent a final BLM decision and will change between publication of the Draft RMP and EIS and Final RMP and EIS based on public comments on the draft document, new information, or changes in laws, regulations, or BLM policies. The BLM will make its final decision after it publishes the Proposed RMP and Final EIS, and will document its decision in a Record of Decision.

Including the No Action Alternative (Alternative A), the four alternatives analyzed in this Draft RMP and EIS represent differing approaches to managing resources and resource uses in the

Planning Area. Each alternative comprises two categories of land use planning decisions: (1) desired outcomes (goals and objectives) and (2) allowable uses and management actions. Goals and objectives direct BLM actions to most effectively meet legal mandates, regulations, and agency policy, as well as local and region resource needs. Goals are broad statements of desired outcomes that are usually not quantifiable. Objectives identify more specific desired outcomes for resources and might include a measurable component. Objectives are generally expected to achieve the stated goals. Allowable uses identify uses that are allowed, restricted, or excluded on BLM-administered surface lands and federal mineral estate. Management actions are proactive measures (for example, measures the BLM will implement to enhance watershed function and condition), or limitations intended to guide BLM activities in the Planning Area. Allowable uses often contain a spatial component because the alternatives identify whether particular land uses are allowed, restricted, or excluded. Alternatives may include specific management actions to meet goals and objectives and may exclude certain land uses to protect resource values.

ES 1.5.1 Alternative A

Alternative A represents the continuation of current management under the existing land use plan (1984), as amended. Direction contained in existing laws, regulation and policy would also continue to be implemented. This alternative provides the baseline against which to compare the other alternatives. Under Alternative A, resources, resource uses, and sensitive habitats would receive management emphasis (methods and mix of multiple use management of public land) at present levels. In general, most activities would be analyzed on a case-by-case basis, and few uses would be limited or excluded as long as land health standards would be met. Current management identifies constraints on mineral leasing in the Planning Area to protect resource values. Current management includes nine Areas of Critical Environmental Concern (ACECs), two National Historic Trails (NHTs), and one horse range (PMWHR). This alternative also includes seven Wild and Scenic River (WSR) eligible waterways, and four Wilderness Study Areas (WSAs). The BLM maintains two Special Recreation Management Areas (SRMAs) under Alternative A and seven areas would be managed as Extensive Recreation Management Areas (ERMAs), and livestock grazing is allowed on all but 37,408 acres of the decision area.

Approximately 42,270 acres would be designated as Visual Resource Inventory Class A or B. Approximately 7,463 acres of public land would be available for disposal with an additional 2,088 acres identified for further study. No Travel Management Areas (TMAs) are established under this alternative. Off-highway vehicle use would be limited to existing roads and trails in the planning area; however, in the Pryor Mountain Wild Horse Range, Acton, Shepherd Ah-Nei, and Horsethief, motorized travel would be restricted to designated routes. South Hills would be designated open for motorcycle use only.

Fluid minerals are available for leasing on 264,534 acres of the BLM-administered federal mineral estate with standard lease terms and are available for leasing on 369,048 acres of the BLM-administered federal mineral estate with major and moderate constraints.

Approximately 7,463 acres of public land would be available for disposal with an additional 2,088 acres identified for further study. Rights-of-Way (ROW) exclusion and avoidance areas encompass 68,217 acres of the BLM-administered surface (ROW exclusion: 44,014 acres, ROW avoidance: 24,203 acres). There would be one designated ROW corridor under this Alternative, encompassing 1,579 acres of the BLM-administered surface.

Under Alternative A, the BLM responds to proposals for renewable wind energy development within the decision area on a case-by-case basis. Although interests in wind energy have increased, no wind farms currently exist in the planning area on the BLM-administered surface. The area of the BLM-administered surface open to renewable wind energy development, but still subject to terms and conditions identified during the right-of-way application process is 361,514 acres. The area of the BLM-administered surface closed to renewable wind energy development is 47,496 acres. Alternative A has the highest number of acres available for renewable energy development.

ES 1.5.2 Alternative B

Alternative B emphasizes the conservation of physical, biological, or cultural resources over commodity production, mineral extraction, and motorized recreation. Management actions would focus on those ecological systems that are functioning and healthy and the restoration of ecological systems that have been degraded or altered. Constraints or limitations to commercial uses/resources would be more constrained in this alternative than in most other alternatives, and in some cases and in some areas, uses would be excluded to protect sensitive or fragile resources. Nine ACECs would be retained and three additional ACECs are proposed under this alternative. Alternative B includes proposing the Greater Sage-Grouse Habitat ACEC. The management activities allowed in the ACECs, under this alternative, are the most restrictive. Other Special Designations include two National Historic Trails (NHTs), one horse range (PMWHR), seven Wild and Scenic River (WSR) eligible and recommended suitable waterways, and four Wilderness Study Areas (WSAs). The BLM would maintain the two existing Special Recreation Management Areas (SRMAs) and manage four additional areas as SRMAs under Alternative B, and eleven areas would be managed as Extensive Recreation Management Areas (ERMAs), and livestock grazing would be allowed on all but 38,373 acres of the decision area. Acreages and locations for sage-grouse Protection Priority Areas (PPAs), Restoration Areas (RAs) and general habitat areas are the same for all action alternatives (B, C, and D), however under Alternative B, the PPAs are proposed as an ACEC.

Approximately 45,511 acres would be designated as Visual Resource Management Class I and II. Approximately 50 acres of public land would be available for disposal. OHV use would be limited to existing roads and trails except in the 11 TMAs where OHV use is limited to designated routes (391.5 miles closed to motorized vehicle use in the 11 TMAs and 348.1 miles open to motorized vehicle use in 11 TMAs). South Hills would be closed to motorized travel under Alternative B.

Fluid minerals are available for leasing on 67,726 acres of the BLM-administered federal mineral estate with standard lease terms. Fluid minerals are available for leasing on 354,136 acres of the BLM-administered federal mineral estate with major and moderate constraints.

Approximately 50 acres of public land would be available for disposal. Rights-of-Way (ROW) exclusion and avoidance areas encompass 369,991 acres of the BLM-administered surface (ROW exclusion: 211,384 acres, ROW avoidance: 185,607 acres). There is one designated ROW corridor under this Alternative, encompassing 1,579 acres of the BLM-administered surface and Silver Tip Road would not be designated a ROW corridor under Alternative B.

Under Alternative B, the area of the BLM-administered surface open to renewable wind energy development is 0 acres. The area of the BLM-administered surface closed to renewable wind energy development is 345,491 acres. Alternative B has the fewest acres open to renewable energy development

ES 1.5.3 Alternative C

Alternative C would emphasize commodity production (forage, minerals, etc.), motorized recreational access, and services. Under this alternative, constraints on commodity production for the protection of sensitive resources would be the least restrictive possible within the limits defined by law, regulation and BLM policy, including the ESA, cultural resource protection laws and wetland preservation. In this alternative, constraints to protect sensitive resources would tend to be implemented in specified geographic areas rather than across the entire planning area. Nine ACECs would be retained and two additional ACECs are proposed under this alternative. The management activities allowed in the ACECs, under this alternative, are the least restrictive. Other Special Designations include two National Historic Trails (NHTs), one horse range (PMWHR), seven Wild and Scenic River (WSR) eligible waterways, and four Wilderness Study Areas (WSAs). The BLM would maintain the two existing Special Recreation Management Areas (SRMAs) and manage nine additional areas as SRMAs under Alternative C, no areas would be managed as Extensive Recreation Management Areas (ERMAs), and livestock grazing would be allowed on all but 28,622 acres of the decision area. Acreages and locations for sage-grouse Protection Priority Areas (PPAs), Restoration Areas (RAs) and general habitat areas are the same for all action alternatives (B, C, and D).

Approximately 46,538 acres would be designated as Visual Resource Management Class I or II. Approximately 4,223 acres of public land would be available for disposal. OHV use would be limited to existing roads and trails except in the 11 TMAs where OHV use is limited to designated routes (5.6 miles closed to motorized vehicle use in the 11 TMAs and 831.1 miles open to motorized vehicle use in 11 TMAs). South Hills would be designated open for motorcycle use only under Alternative C.

Fluid minerals would be available for leasing on 126,732 acres of the BLM-administered federal mineral estate with standard lease terms. Fluid minerals would be available for leasing on 483,419 acres of the BLM-administered federal mineral estate with major and moderate constraints.

Approximately 4,223 acres of public land would be available for disposal. Rights-of-Way (ROW) exclusion and avoidance areas encompass 395,092 acres of the BLM-administered surface (ROW exclusion: 39,491 acres, ROW avoidance: 355,601 acres). There are two designed ROW corridors under this alternative, encompassing 13,832 acres of the BLM-administered surface.

Under Alternative C, the area of BLM-administered surface open to renewable wind energy development, but still subject to terms and conditions identified during the right-of-way application review process, is 21,349 acres. The area of BLM-administered surface closed to renewable wind energy development is 82,019 acres.

ES 1.5.4 Alternative D (Agency Preferred Alternative)

Alternative D addresses the key planning issues identified in Chapter 1 by incorporating elements from each of the other alternatives to strike a balance between long-term conservation of public land and resources within the planning area with commodity production, recreational access, and services. Alternative D represents an approach to land management that address the issues, management concerns, and purpose and need while balancing resources and resource uses. Nine ACECs would be retained and two additional ACECs are proposed under this alternative. The total acreage for the ACECs strikes a balance between the acreages of Alternative B and Alternative C and in some cases the management activities allowed in the ACECs is as restrictive as Alternative B. Other Special Designations include two National Historic Trails (NHTs), one horse range (PMWHR), two Wild and Scenic River (WSR) eligible and recommended suitable waterways, and four Wilderness Study Areas (WSAs). The BLM would maintain the two existing Special Recreation Management Areas (SRMAs) and manage seven additional areas as SRMAs under Alternative D, and two areas would be managed as Extensive Recreation Management Areas (ERMAs). Livestock grazing would be allowed on all but 28,387 acres of the planning area. Acreages and locations for sage-grouse Protection Priority Areas (PPAs), Restoration Areas (RAs) and general habitat areas are the same for all action alternatives (B, C, and D).

Approximately 42,509 acres would be designated as Visual Resource Management Class I or II. Approximately 170 acres of public land would be available for disposal. OHV use would be limited to existing roads and trails except in the 11 TMAs where OHV use is limited to designated routes (59.9 miles closed to motorized vehicle use in the 11 TMAs and 616.7 miles open to motorized vehicle use in 11 TMAs). South Hills would be designated open for motorcycle use only under Alternative D.

Fluid minerals would be available for leasing on 6,158 acres of the BLM-administered federal mineral estate with standard lease terms. Fluid minerals would be available for leasing on 599,938 acres of the BLM-administered federal mineral estate with major and moderate constraints.

Approximately 170 acres of public land would be available for disposal under Alternative D. Rights-of-Way (ROW) exclusion and avoidance areas encompass 397,616 acres of the BLM-administered surface (ROW exclusion: 48,258 acres, ROW avoidance: 349,358 acres). There

are two designated ROW corridors under this Alternative, encompassing 4,511 acres of the BLM-administered surface.

Under Alternative D, the area of BLM-administered surface open to renewable wind energy development, but still subject to terms and conditions identified during the right-of-way application process, is 20,937 acres. The area of BLM-administered surface closed to renewable wind energy development is 78,088 acres.

ES 1.6 Environmental Consequences

This section summarizes the environmental consequences that would result from implementing each of the four alternatives. The purpose of the environmental consequences analysis is to determine the potential impacts of the federal action under each of the four alternatives on the human environment, while focusing on key planning issues identified by the BLM and raised during the scoping process. The analysis of environmental consequences is organized according to resource and includes: physical, biological, and cultural/heritage resources; resource uses and support; special designations; and socio-economic resources.

ES 1.6.1 Physical, Biological, and Cultural/Heritage Resources

ES 1.6.1.1 Air

Impacts to air quality as a result of proposed BLM management actions by all Alternatives would be minor, short term, and localized to the project area. Because of the land base and land pattern managed by the Billings Field Office (4% of the surface acres in the eight- county planning area), the potential for BLM management actions and authorizations to contribute significantly to air quality deterioration is low. The use of prescribed fire would have the greatest potential to impact air quality over large areas; however smoke management through coordination with the Montana/Idaho Airshed Group would ensure that air quality standards are met.

ES 1.6.1.2 Soil

Impacts to soil resources may result from surface disturbance associated with a variety of resource programs including minerals development, motorized vehicle use, road construction, and recreation. When it contributes to offsite erosion and sediment delivery, surface disturbance is an adverse impact to water resources as well. Actions that restrict surface disturbance or restore vegetation on disturbed areas occur under all alternatives and generally are considered to have a beneficial impact on soil and water resources by limiting erosion. Alternatives B, C, and D all limit surface disturbing activities, however more impacts to soil and water resources are anticipated under Alternative C. Alternative C has the fewest restrictions to surface use authorizations, therefore providing the least amount of protection for soil resources of all the Alternatives. Alternative B is the most restrictive. Alternative D also places restrictions on surface use authorizations, but is less restrictive than B and more than C.

ES 1.6.1.3 Water

Under all Alternatives, water resources would benefit from management in accordance with Rangeland Health Standards and applicable state and federal water-quality standards. Site specific mitigation and BMPs for surface disturbing activities would also reduce impacts to water resources. However with the scattered distribution of BLM-administered public lands in the planning area (4% of the surface area in an 8 county area), management actions to minimize impacts to water resources may not prevent impaired water quality on BLM waterways.

ES 1.6.1.4 Cave and Karsts

Cave and Karsts are managed as mandated by the Federal Cave Resource Protection act as well as other Acts, such as the Endangered Species Act. Management actions in the RMP are in conformance with these prescriptions and protect the unique, nonrenewable, fragile, biological, geological, hydrological, cultural, paleontological, scientific, and recreational values. The management actions would result in significant restrictions of casual use of caves and karsts, but also provide more directed and focused responses due to the mandate for development of a specific Cave and Karsts Management Plan.

ES 1.6.1.5 Biological Resources

Biological resources include vegetation, fish, wildlife, special status species, and wild horses.

Vegetation resources analyzed in this RMP revision include forests and woodlands, rangeland and shrubland communities, riparian/wetland resources, invasive species and noxious weeds, and special status plants; these plant communities incorporate the major vegetation types in the Decision Area. Long-term surface disturbance contributes to the decline in abundance, distribution, or health of vegetation communities in the Decision Area. Conversely, short-term surface disturbance from vegetation treatments would improve vegetation health and diversity, and may reduce the severity of wildland fires that destroy or permanently alter vegetation communities.

ES 1.6.1.5.1 Woodlands

Especially in forests and woodlands, active management, such as timber harvesting and silviculture treatments, would reduce the potential for catastrophic fires (the greatest threat to forests and woodlands), reduce the number of diseased trees, enhance age and species diversity, and reduce the spread of invasive species. Alternative C would result in the most long-term surface disturbance and allows the most activities that would adversely affect forests and woodlands, such as retaining timber harvest roads post-harvest for recreational activities. Conversely, Alternative C would result in the greatest beneficial impact to forests and woodlands due to the use of silviculture treatments, followed by alternatives D, A, and B respectively. Alternatives that allow the greatest use of silviculture treatments would result in the greatest beneficial impacts to the harvest of forest products. Management actions that advance active vegetation management, such as mechanical fuels treatments and invasive species control measures, would result in beneficial impacts to grassland and shrubland communities

ES 1.6.1.5.2 Range and Shrublands

Rangelands and shrublands are the largest habitat type in the Planning Area and, assuming a proportional distribution of the projected surface disturbance would occur in these communities, Alternative B would result in most short term impacts from long-term surface disturbance over the life of this plan (22,414 acres of crested wheatgrass treated), followed by alternatives D and C (12,000 acres and 7,500 acres, respectively), and Alternative A (160 acres). While Alternative B has the most short term impacts as a result of the crested wheatgrass treatments, it would result in the highest long term benefit.

ES 1.6.1.5.3 Riparian

Impacts to riparian/wetland areas occur as a result of either direct surface disturbance or actions in a watershed that cause a change in riparian/wetland functionality, such as changes in sediment loading rates or hydrology. Alternative B would result in the greatest direct beneficial impacts to riparian/wetland resources through restrictions on surface-disturbing activities in proximity to riparian/wetland resources and through proactive management actions. Alternatives D, A, and C, respectively, would result in less protection for riparian/wetland areas.

ES 1.6.1.5.4 Invasive Species and Noxious Weeds

The presence of invasive species and noxious weeds is considered an adverse impact to other biological resources in the Planning Area and, in spite of management proposed in this RMP, invasive species are expected to spread under all alternatives. Those alternatives projected to involve the greatest amount of surface disturbance would have the potential to result in the greatest adverse impacts from the spread of invasive species. Based on projected surface disturbance and the types of preventative measures required, Alternative C would result in the greatest potential for the spread of invasive species, followed by alternatives A, D, and B. Alternative D is projected to result in greater surface disturbance than Alternative A, but contains more stringent reclamation requirements that would result in a reduced potential for the spread of invasive species.

ES 1.6.1.6 Fisheries

The health of riparian/wetland areas, and water quality and quantity would affect fish populations in the Decision Area. Increased sediment in fish habitat (streams and rivers) decreases the potential for fish to naturally reproduce, fills in pools, leads to channel degradation, decreases light penetration and productivity, alters fish community composition, and increases stream temperature. Based on overall surface disturbance, reclamation practices, and fish habitat management including erosion control and reservoir design, Alternative B would result in the most beneficial impact to fish (including special status species fish), followed by alternatives D, C, and A respectively.

ES 1.6.1.7 Wildlife

The primary adverse impacts to wildlife result from surface disturbance related habitat loss and fragmentation; the primary beneficial impacts to wildlife result from management that restricts

surface disturbing activities in known or potential wildlife habitat and disruptive activities (e.g., motorized vehicle use, recreation) that can cause the abandonment of nest sites or home ranges. Alternative B minimizes wildlife habitat loss and fragmentation in the Decision Area (e.g., closing areas to oil and gas development) to the greatest degree, followed by alternatives D, C, and A respectively.

Impacts to special status plants, fish, and wildlife species are generally the same as those for vegetation, fish, and wildlife; however, all the alternatives include additional protective management for special status species. Overall, proactive management actions would be most beneficial to special status species under alternatives B, D, C, and A respectively. Alternative B would result in the greatest beneficial impacts to Yellowstone cutthroat trout and other special status fish species habitat. Alternative B includes the most proactive actions to restore and enhance habitats for special status wildlife species.

ES 1.6.1.7.1 Wild Horses and Burros

Wild horses are managed for self-sustaining populations of healthy, free-roaming animals in balance with other uses and the productive capacity of their habitat within the Pryor Mountain Wild Horse Range. Impacts to wild horses include recreational and visitor activities, with the most impacts to wild horses occurring under Alternative A, followed by Alternatives C, D, and B. Under Alternative D, habitat and range improvement would be maximized to benefit the wild horses, followed by Alternative C, A, and B. Under Alternative B, the range improvements (i.e. water tanks, guzzlers, reservoirs) would be removed.

ES 1.6.1.8 Fire and Fuels Management

Fire is an integral part of natural ecosystem function; however, the natural fire regime largely has been suppressed in the Planning Area. Although the suppression of the natural fire regime is considered an adverse impact to fire ecology, actions contributing to an increase in the incidence of wildland fires or limiting the ability to effectively fight wildland fires are considered adverse impacts to fire management. Management under the alternatives would affect two aspects of fire and fuels management: wildfires (unplanned ignitions) and prescribed fires (planned ignitions).

All Alternatives utilize wildfire management to restore fire-adapted ecosystems and reduce hazardous fuels. Alternative A would result in the greatest potential for adverse impacts from human-caused, unplanned ignitions due to increased access and additional travel routes under this alternative. Under Alternatives A and C, wildfire would not be used to meet resource objectives, while under Alternatives B and D wildfire would be used to meet resource objectives (Alternative B: 52,548 acres over a 10 year period and Alternative D: 62,937 acres over a 10 year period). Prescribed fires can be used to meet resource objectives, such as for wildlife habitat enhancement, forage production, and fuel reduction. Under Alternative A, only 6,280 acres would be treated over a 10-year period, while under Alternatives B, C, and D, 21,700 acres would be treated using prescribed fire over the next 10 years.

ES 1.6.1.9 Cultural and Heritage Resources

Because cultural resources are fragile, often unique, nonrenewable resources that occupy relatively small areas, almost any management action has the potential to affect them. Primary impacts to cultural resources result from surface disturbance, visual intrusions, and theft and vandalism. Overall, Alternative C is projected to result in the most surface disturbance and, therefore would result in the greatest adverse impacts to cultural resources.

The widespread presence of paleontological resources throughout the Planning Area and their close spatial association with extractive (i.e., mineral) resources present a number of management challenges. Any surface-disturbing activities in an area that can physically alter, damage, or destroy fossils or their context may result in adverse impacts to important paleontological resources. Across all action alternatives, paleontological resource inventories would occur prior to surface disturbing activities in areas with moderate to high potential for paleontological resources. This would help surface disturbing projects avoid disturbing paleontological resources. Alternative C provides the greatest exposure to direct impacts from surface-disturbing activities, but may result in more identification of paleontological localities due to increased resource use.

ES 1.6.1.10 Visual Resources

Adverse impacts to visual resources result from projects that create visual contrast with the natural form, line, color, or texture of the landscape inconsistent with the management objectives for that area. Under all alternatives, traditional resource uses and development would continue, allowing varying degrees of development and resulting in impacts to visual resources. The overall contribution of the proposed management actions to the cumulative impact on visual resources is expected to be a minor incremental increase to the visual disturbances as a result of mineral resource development, transportation, wildfire, and vegetation treatments. Additionally, there would be incremental increases in the areas managed to protect visual resources. Mitigation would likely limit the impacts in viewsheds with high scenic quality in the Billings Field Office decision area.

ES 1.6.1.11 Lands with Wilderness Characteristics

Currently the Billings Field Office is managing 1,925 acres and lands with wilderness characteristics. Alternative B identifies the highest number of tracts to be managed for lands with wilderness characteristics (27,292 acres), followed by Alternative D (13,653 acres) and Alternative C (3,379 acres). Under each of the alternatives these areas would be managed to protect their wilderness characteristics and this management would adversely affect resource uses and other activities (e.g. motorized vehicle use) that could degrade the naturalness and opportunities for solitude and primitive, unconfined recreation in these areas. By any Alternative, managing any of the non-WSA lands with wilderness characteristics for other resource values could lead to long-term degradation of wilderness values on those lands, although generally those lands have other management prescriptions which could provide some similar protective measures.

ES 1.6.1.12 Resource Uses and Support

ES 1.6.1.12.1 Mineral Resources

Mineral resources include locatable, leasable (fluid minerals and coal), and mineral materials. The Billings Field Office manages 10,804,549 acres of federal mineral estate in the planning area. Implementation of the alternatives would result in public lands remaining open (a beneficial impact), or withdrawn or segregated (an adverse impact) from locatable mineral entry under the mining laws.

Under Alternative A, the entire planning area is open to locatable mineral entry except for 1,855 acres which are currently withdrawn and would remain withdrawn from locatable mineral entry for all Alternatives. BLM consideration to future proposals to develop locatable minerals in the planning area would vary between alternatives. Areas recommended for withdrawal from locatable mineral entry in the planning area range from 37,845 acres (Alternative A) to 269,122 acres (Alternative B). In cases involving valid mining claims, exploration for locatable minerals would occur under all alternatives. With the exception of bentonite, the development potential for other locatable minerals in the planning area is low. Commercially important bentonite deposits in the planning area are located in southern Carbon County and occur in the Mowry and Thermopolis formations. Current and future bentonite surface mining operations would not be affected under any of the alternatives because the mining claims are valid, existing rights and the areas recommended for withdrawal do not coincide with areas having development potential.

The development potential for fluid leasables in the planning area ranges from moderate to no potential, depending on location. The Reasonable Foreseeable Development (RFD) scenario for the Billings Field Office is 2 to 4 oil and gas wells per year for all Alternatives. Management actions that restrict or constrain the potential for oil and gas leasing, development, and exploration would result in adverse impacts; management actions that ease restrictions or maintain areas as open for oil and gas exploration and development would result in beneficial impacts. All of the alternatives include management that restrict oil and gas leasing and development to varying levels, with Alternative A generally allowing the most development and Alternative B the least. Alternative A contains the smallest acreage managed as administratively unavailable for oil and gas leasing (39,730 acres), followed by Alternative C (65,891 acres), Alternative D (72,915 acres), and Alternative B (302,713 acres).

Coal development could occur under alternatives A, C, and D. However, under alternative B, future coal leasing actions would be prohibited. Most of the area closed to coal development in Alternatives A, C, and D occurs in areas where the coal development potential is extremely low or does not exist.

Areas recommended for closure to mineral materials disposal in the planning area range from 44,583 acres (Alternative A) to 343,745 acres (Alternative B). Although there is a wide variance between alternatives, the plan would provide land-use opportunities for the development of mineral materials. It would provide economic benefits and meet local

infrastructure needs while protecting or minimizing adverse impacts to other resources and their uses.

The BLM anticipates only limited development for locatable minerals, fluid minerals, coal, and mineral materials during the life of the plan and, therefore, effects to the development of these resources from the alternatives are expected to be minimal.

ES 1.6.1.13 Lands and Realty

Land Resources includes lands and realty, renewable energy, travel and trail management, recreation and visitor management, non-WSA lands with wilderness characteristics, and livestock grazing management.

Impacts to the lands and realty program from implementing the alternatives include land disposal, acquisition, and withdrawal, and management that make realty actions more difficult to complete (i.e. larger ROW avoidance and exclusion areas). Alternative A identifies the most land available for disposal (7,529 acres with an additional 2,088 acres identified for further study), followed by Alternative C (4,223 acres), Alternative D (170 acres), and Alternative B (50 acres). ROWs are for infrastructure and facilities, including renewable energy facilities for wind, solar, and biomass that are in the public interest and require authorization for location over, under, on, or through BLM-administered land. Adverse impacts to ROWs result from restrictions, in the form of avoidance/mitigation and exclusion areas, on the location of ROWs. Alternative A is the least restrictive followed by Alternatives C, D, and B.

ES 1.6.1.14 Renewable Energy

Impacts to Renewable Energy from implementing the alternatives include restrictions on renewable energy development. Alternative A has the least restrictions on renewable energy development, followed by Alternatives C, D, and B.

ES 1.6.1.15 Travel and Transportation

Adverse impacts to travel and transportation management result from restrictions on or closures of travel routes to motorized or mechanized vehicles, while beneficial impacts would result from management that increases access to public lands. Currently travel is limited to existing roads and trails. Eleven Travel Management Areas (TMAs) are proposed under Alternatives B, C, and D, with the number of miles or roads open/closed to motorized use varying by alternatives. Alternative is the least restrictive (no TMAs), followed by Alternatives C, D, and B. Overall, Alternative C would cause the fewest adverse impacts (and the most benefits) to travel and transportation management, followed by alternatives A, D, and B.

ES 1.6.1.16 Recreation

Management that affects settings, experiences, and the ability of recreationists to achieve desired beneficial outcomes from uses on public lands (e.g., hunting or camping) are impacts to recreation. The increase in vehicle-based recreation and urban development, and associated

population growth all contribute to increased demand for recreational opportunities in the region. As a result the decision area could experience increased recreational visitors over the life of the plan, which could degrade certain recreational settings, resulting in diminished recreational opportunities and experiences, or increase user conflicts associated with dispersed unconfined recreational opportunities. There would be a minor incremental impact to recreational opportunities and experiences from proposed management actions.

ES 1.6.1.17 Livestock Grazing

The primary impacts to livestock grazing result from management that alters the area available to livestock grazing, constrains the placement or types of range improvements, or changes the number of animal unit months (AUMs) available to operators. The number of acres closed to grazing is 37,408 acres for Alternative A; 38,373 acres for Alternative B; 28,622 acres for Alternative C; and 28,387 acres for Alternative D. The acres of crested wheatgrass treated over the life of the plan is greatest under Alternative B (22,414 acres) followed by Alternatives D (12,000 acres), Alternative C (2,500 acres) and Alternative A (160 acres). Crested wheatgrass conversions could cause short-term impacts to livestock grazing as a result of treatment.

ES 1.6.1.18 Special Designations

Special Designations include National Monuments, Areas of Critical Environmental Concern (ACECs), National Historic Landmarks, National Natural Landmarks (NNLs), National Historic Trails (NHTs), Wild and Scenic Rivers (WSRs), Wilderness Study Areas (WSAs), and Horse Ranges (PMWHR).

ES 1.6.1.18.1 Pompeys Pillar National Monument and ACEC

Under all Alternatives, Pompeys Pillar National Monument and ACEC (432 acres) would continue to be managed to protect the historical, cultural, and biological values, including its outstanding viewsheds and unique resources of the area. Emphasis on providing opportunities for interpretation, education, and enjoyment of the area would continue. The ACEC would be available for oil and gas leasing, subject to a No Surface Occupancy (NSO) stipulation. The ACEC has a low mineral development potential; therefore, while the NSO stipulation protects the values of concern within the ACEC, there would be minimal adverse impacts to oil and gas leasing. Pompeys Pillar National Monument (51 acres) which is included in a portion of the ACEC, would be managed to protect the historical and cultural objects for which is was nominated, and would be withdrawn from all forms of entry, location, selection, sale or disposition, subject to valid existing rights.

The National Historic Landmark (NHL 6 acres) which includes the rock feature itself would be managed as a VRM Class II to protect the values associated with the landform. The remainder of the ACEC would be managed as VRM Class III. This would allow for interpretive and educational programming, facilities and access to and within the site, while ensuring the visual quality and visual obtrusions are minimized or mitigated to protect the scenic values of the area.

ES 1.6.1.18.2 Areas of Critical Environmental Concern

ACECs are designated to protect resources, natural systems, and natural hazards values. ACECs proposed in the Decision Area include cultural, paleontological, vegetation, wildlife, special status species, recreational, and scenic values. To protect the values of concern, ACECs commonly include restrictions on mineral development and other surface-disturbing activities or motorized vehicle use. Alternative B, containing the most restrictive management activities proposes 12 ACECs (181,175 acres), followed by Alternative C (11 ACECs and 67,079 acres), Alternative D (11 ACECs and 38,786 acres), and Alternative A (9 ACECs and 37,896 acres). Alternative B, while proposing the largest acreage for ACEC designation, contains the most restrictive management. Alternative B would be the most effective at protecting the values of concern within ACECs by restricting resource uses and activities within these areas, followed by Alternatives D, C, and A respectively.

ES 1.6.1.18.3 National Historic Trails

National Historic Trails (NHTs) are designated to protect cultural resources; the principle impacts to the Nez Perce (Nee-me-poo or Nimi'ipuu) NHT and the Lewis and Clark NHT arise directly from development activities and intrusions into the viewshed that alter the environment that contributes to the trails' significance. Alternative B provides the greatest protection for these trails through the application of larger buffer zones for surface-disturbing activity (both no surface occupancy [NSO] and controlled surface use [CSU] stipulations). The larger acreage of special designations and limited resource use under Alternative B also reduce the potential for direct and indirect adverse impacts. Alternative C allows the greatest resource use, and provides the least protection through special designations, but does provide more effective proactive management, including NSO and CSU restrictions, than Alternative A. Alternative A, the existing management, includes the least effective proactive management in part because of the change in understanding of the adverse impact of viewshed intrusions that has evolved since this management was developed.

ES 1.6.1.18.4 Wild and Scenic Rivers

Alternatives A and C manage the eligible waterway segments and associated waterway corridors and seek to preserve their free-flowing characteristics, outstandingly remarkable values (ORVs), or characteristics that justified their tentative classifications. In contrast, under Alternative B, the eligible waterways would be managed as suitable for inclusion in the WSR system. Alternative D proposed to manage only 2 of the eligible waterways as suitable for inclusion in the WSR system.

Alternative B is the most protective of WSR eligible and draft suitable waterway segments and could result in the greatest beneficial impact to the free-flowing characteristics, ORVs, and characteristics that justified their tentative classifications as wild, scenic, or recreational waterways by restricting or limiting resource uses that could degrade these qualities. Alternatives A and C include the least restrictive management of several resource uses and would have the fewest adverse impacts on mineral development, livestock grazing, and timber harvesting. Due to the extent and intensity of the restrictions under Alternative B, the beneficial

impacts to the WSR-related qualities and the adverse impacts to other activities and resource uses would be greatest under this alternative.

ES 1.6.1.18.5 Wilderness Study Areas

WSAs exist under all alternatives and are managed under the Interim Management Policy and Guidelines for Lands under Wilderness Review, which restricts discretionary activities in WSAs to ensure that their suitability for Wilderness designations is not impaired. Although there are limited discretionary actions the BLM can take that would affect WSAs, management under Alternative B would result in the greatest beneficial impacts to WSAs by emphasizing resource protection and limiting the potential for activities, such as motorized vehicle use, in and adjacent to WSAs that may adversely affect wilderness characteristics, followed by alternatives D, C, and A, respectively.

ES 1.6.1.18.6 Pryor Mountain Wild Horse Range

The Pryor Mountain Wild Horse Range (PMWHR) was established under two Secretarial Orders in 1968 and 1969 prior to the Wild and Free-Roaming Horses and Burros Act. The PMWHR is to be managed principally, but not necessarily exclusively, for the benefit of wild horses within the authorities of the Wild Free-Roaming Horse and Burro Act of 1971, as amended. The designation of the PMWHR itself does not restrict other uses (travel, mineral and energy development, commercial activities, etc.) it is the overlaying management of the WSAs that restricts commercial activities within the PMWHR.

ES 1.6.1.19 Social and Economic Resources

Socioeconomic resources include social conditions, economic conditions, health and safety, environmental justice, and tribal treaty rights.

Impacts to social conditions in the Planning Area include changes in the quality of life for the various groups and individuals who have a direct relationship to management of BLM lands. These groups include ranchers/livestock grazing permittees, recreationists (including those who enjoy motorized and non-motorized activities), groups and individuals who prioritize resource protection, groups and individuals who prioritize resource use, wild horse advocates and American Indian Tribes. In some cases, social conditions are closely tied to changes in economic impacts including employment, earnings and tax revenues for local and state governments.

Under Alternatives A and C, the quality of life of permittees, those who prioritize resource use, and some residents of small communities would be maintained. Those who place a high priority on protection of wildlife habitat, water resources, vegetation, etc., would not feel these resources would be adequately maintained. Under Alternatives B, the quality of life of those who prioritize resource protection would be maintained while that of permittees, some residents of small communities, and those who favor resource use would decline. Alternative D offers a balance between resource use and resource protection which would meet many of the needs of the groups and individuals interested in public lands."

While minority and low-income populations exist in the Planning Area, none of the alternatives are expected to result in disproportionate adverse impacts to these populations. The BLM would continue to consult with interested tribes regarding issues of importance to the tribes under all alternatives.

The combined effects of the anticipated level of activities associated with BLM management under each alternative would contribute about 477 to 492 local jobs and $19.94 million to $20.81 million in wage and proprietor's income. This would be less than 0.3% of current local employment and income. Annual revenues to the federal government would be between $8.0 to 9.8 million; payment to the counties would be between $4.21 to 4.5 million, most of which would be related to mineral leasing, rents, and production royalties, again varying by alternative. Local populations would increase by an average of 119 people and the number of households would increase by 41 to 50 households, varying by alternative. Populations and households would increase by approximately 0.05% relative to current levels.

Common to all alternatives, the employment, income, and revenue effects of BLM resource management would be spread unequally among the counties and communities within the Planning Area and the 10 counties that make up the local economy. Most of BLM land and minerals base and land/mineral uses are in Carbon and Musselshell counties. Much of the economic impacts would also occur in those counties. The influence of resource management on BLM-administered lands would not change local economic diversity (as indicated by the number of economic sectors), dependency (i.e. where one or a few industries dominate the economy), or stability (as indicated by seasonal unemployment, sporadic population changes, and fluctuating income rates). The population density and average income per household would continue to be about the same as current levels.

ES 1.7 The Next Steps

This Draft RMP and EIS, now issued, provides 90 days for public comment. A series of five public meetings on this Draft RMP and EIS are scheduled during the 90-day comment period in Big Timber, Billings, Bridger, Roundup, Montana, and Lovell, Wyoming. Following the 90-day public comment period, the BLM will prepare a Final EIS considering comments submitted. The Proposed RMP and Final EIS is scheduled for release after an analysis of the public comments received on the Draft RMP/EIS and appropriate adjustments made in the plan. The Record of Decision scheduled subsequent to release of the Proposed RMP and Final EIS.